
U.S. Department of the Interior • U.S. Geological Survey

MINERAL INDUSTRY SURVEYS

Gordon P. Eaton, Director

Reston, VA 20192

For information, contact:

Jozef Plachy, Zinc Specialist

Telephone: (703) 648-4982, Fax: (703) 648-7757

E-mail: jplachy@usgs.gov

Stephen M. Jasinski (Data), (703) 648-7955

MINES-DATA: (703) 648-7799

MINES FaxBack: (703) 648-4999

Internet: <http://minerals.er.usgs.gov/minerals>

ZINC IN MARCH 1997

Domestic mine production in March, expressed in zinc content of ore, was about the same as in February, but nearly 9% lower than in March 1996. Apparent consumption increased by more than 18% over consumption in February and by about 11% over that in March 1996.

The Platt's Metals Week composite price for North American Special High Grade zinc rose by nearly 6%. The rising price of zinc metal, more than 22% higher than a year ago, was a reflection of declining London Metal Exchange stocks, which dropped to 441,100 tons from 623,000 tons a year ago.

According to industry sources, Savage Resources has approved a \$7.6 million feasibility study into the expansion of its Clarksville, TN, zinc refinery from 110,000 tons to 275,000 tons of concentrates per year. The expansion will depend on the availability of low-iron concentrates.

Anvil Range Mining Corp. of Canada has reached an agreement with the union representing about 350 workers at its Faro Mine, in Canada's Yukon Territory. The new 3-year contract is retroactive to Nov. 1, 1996. Since the December 1996 closure of the mine, the Faro mill has been processing stockpiled ore at a rate of 11,500 tons per day. When the stockpile is depleted, around the end of March, operation of the mill will cease until a decision is made about the future of the entire mining complex (Metal Bulletin, 1997a).

Privatization of Peruvian state-owned Empresa Minera del Centro del Peru S.A. (Centromin) may conclude in the courts, because of the dispute over the polymetallic Yauliyacu (formerly Casapalca) Mine, 47 kilometers east of Lima. Brazil's Paranapanema S.A. Mineração Indústria e Construção was awarded the mine in December 1996, but on February 25, 1997, the agreement was voided, and the Yauliyacu Mine was sold to a Peruvian firm, Cía. Minera Casapalca S.A., ostensibly for not providing the required investment guarantee within the allotted time. Yauliyacu has proven reserves of 7.3 million tons grading 3.7% zinc, 1.9% lead, 0.5% copper, and 285 grams of silver per metric ton (Platt's Metals Week, 1997). The Andaychagua and

San Cristobal Mines, 50 kilometers from the La Oroya smelter, are to be auctioned by the end of May. Combined annual production of these two mines was 1 million ton of ore containing zinc, lead, copper, and silver (Metal Bulletin, 1997b).

With the first shipment of concentrates from its Galmoy Mine, Ireland's Arcon International Resources transformed itself from an exploration/development company into a mineral-producing company. The underground mine is designed to produce 650,000 tons of ore per year, yielding an estimated 65,000 tons of zinc in concentrate, over a mine life of at least 13 years. About 90% of the concentrate will be sold under a long-term contract with European zinc smelting companies. The \$134 million development of the Galmoy Mine was based on a feasibility study which indicated proven reserves of 6.2 million tons of ore grading 11.4% zinc and 1.1% lead. Since that study, additional resources have been discovered in the mine area and nearby (Mining Journal, 1997a).

Zinc Corp. of South Africa (Zincor) is considering a 20% expansion of its 100,000 ton-per-year Springs zinc smelter in South Africa. Since domestic consumption is in the range of 95,000-100,000 tons of zinc, planned expansion will boost exports to neighboring countries. The \$27 million expansion, which will also include installment of new technology, should commence in the second half of 1997 (Mining Journal, 1997b).

References Cited

- Metal Bulletin, 1997a, Anvil Range union in favor of new contract: Metal Bulletin, no. 8161, March 13, p. 11.
- 1997b, Centromin to auction two more mines in May: Metal Bulletin, no. 8163, March 20, p. 5.
- Mining Journal, 1997a, Galmoy ships first zinc: Mining Journal, v. 328, no. 8422, March 28, p. 1.
- 1997b, Zincor expansion: Mining Journal, v. 328, no. 8420, March 14, p. 221.
- Platt's Metals Week, 1997, Paranapanema, Centromin in dispute over zinc-lead mine: Platt's Metals Week, March 3, p. 6.

TABLE 1
SALIENT ZINC STATISTICS 1/

(Metric tons)

	1996			1997			
	March	Jan.-Mar.	Jan.-Dec. p/	January	February	March	Jan.-Mar.
Production:							
Mine, zinc content of concentrate	52,100	158,000	603,000	48,400	47,900	47,600	144,000
Mine, recoverable zinc	49,700	151,000	575,000	46,200	45,700	45,400	137,000
Smelter, refined zinc	30,400	91,000	366,000	32,700	29,800 r/	29,800 e/	92,200
Oxide (gross weight)	12,200	33,300	129,000	10,600	10,400	10,900	31,900
Consumption:							
Refined zinc, reported	59,300 r/	171,000 r/	661,000	45,700 r/	43,900 r/	49,300	139,000
Ores e/ (zinc content)	150 r/	450 r/	1,800	150	150	150	450
Zinc-base scrap e/ (zinc content)	8,300 r/	24,900 r/	100,000	8,300	8,300	8,300	24,900
Copper-base scrap e/ (zinc content)	14,000 r/	42,000 r/	170,000	14,000	14,000	14,000	42,000
Aluminum- and magnesium-base scrap e/ (zinc content)	67 r/	201 r/	800	67	67	67	201
Total e/	81,800 r/	239,000 r/	933,000	68,200 r/	66,500 r/	71,900 r/	207,000
Apparent consumption, metal 2/	99,900 r/	275,000 r/	1,210,000	128,000 r/	93,900 r/	111,000	333,000
Stocks of refined (slab) zinc, end of period:							
Producer 3/	7,860 r/	XX	XX	11,300 r/	11,000 r/	11,000 e/	XX
Consumer 4/	65,400 r/	XX	XX	54,400 r/	57,200 r/	57,200	XX
Merchant	4,520	XX	XX	5,300	5,040	5,590	XX
Total	77,800 r/	XX	XX	71,000 r/	73,300 r/	73,800	XX
Shipments of zinc metal from Government Stockpile	--	2,680	16,500	3,020	4,400	5,080	12,500
Imports for consumption:							
Refined (slab) zinc	65,000	185,000	827,000	92,100	62,300	NA	154,000 5/
Oxide (gross weight)	4,840	15,200	56,300	4,410	5,470	NA	9,880 5/
Ore and concentrate (zinc content)	680	951	15,100	2,730	--	NA	2,730 5/
Exports:							
Refined (slab) zinc	--	1,460	1,970	280	249	NA	528 5/
Oxide (gross weight)	613	3,930	5,770	371	537	NA	908 5/
Ore and concentrate (zinc content)	1,880	10,800	425,000	8,660	9,280	NA	17,900 5/
Waste and scrap (gross weight)	4,630	12,900	45,500	2,780	3,670	NA	6,450 5/
Price:							
London Metal Exchange, average, per metric ton	\$1,064.29	\$1,048.72	\$1,025.03	\$1,086.52	\$1,179.38	\$1,254.80	\$1,173.57
Platt's Metals Week North American Special High Grade, average, ¢ per pound	51.24	50.84	51.11	55.17	59.26	62.69	59.04

e/ Estimated. p/ Preliminary. r/ Revised. NA Not available. XX Not applicable.

1/ Data are rounded to three significant digits, except prices; may not add to totals shown.

2/ Smelter production plus imports minus exports plus shipments from Government stockpile plus stock change.

3/ Data from U.S. Geological Survey and American Bureau of Metal Statistics.

4/ Includes an estimate for companies that report annually.

5/ Includes data through February only.

TABLE 2
REFINED ZINC PRODUCED IN THE UNITED STATES 1/

(Metric tons)

Month	Beginning stocks 2/	Production	Shipments	Ending stocks 2/
1996:				
Jan.-Mar.	XX	91,000	90,300	XX
March	8,610	30,400	31,100	7,860
April	7,860	29,800	29,400	8,280
May	8,280	30,500	30,800	8,040
June	8,040	30,400	30,300	8,130
July	8,130	30,800	30,100	8,830
August	8,830	27,400	26,800 r/	9,380 r/
September	9,380 r/	30,800	30,600 r/	9,600 r/
October	9,600 r/	32,300	31,700 r/	10,100 r/
November	10,100 r/	32,000	30,200 r/	11,900 r/
December	11,900 r/	31,200	32,100 r/	11,100 r/
Total p/	XX	366,000	362,000 r/	XX
1997:				
January	11,100 r/	32,700	32,500 r/	11,300 r/
February r/	11,300	29,800	30,100	11,000
March e/	11,000	29,800	29,800	11,000
Jan.-Mar.	XX	92,200	92,300	XX

e/ Estimated. p/ Preliminary. r/ Revised. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes stocks held at locations other than smelters.

Sources: U.S. Geological Survey and American Bureau of Metal Statistics.

TABLE 3
ZINC OXIDE PRODUCED 1/ IN THE UNITED STATES 2/

(Metric tons, gross weight)

Month	Beginning stocks	Production	Shipments	Ending stocks
1996:				
Jan.-Mar.	XX	33,300	36,500	XX
March	3,100	12,200	11,500	3,740
April	3,750	11,400	11,600	3,530
May	3,530	11,200	11,400	3,390
June	3,390	10,300	9,920	3,800
July	3,800	9,100	9,560	3,340
August	3,340	9,870	10,200	3,060
September	3,060	10,100	9,830	3,210
October	3,320	11,100	11,100	3,260
November	3,260	11,100	11,100	3,240
December	3,240	11,400	11,100	3,540
Total p/	XX	129,000	132,000	XX
1997:				
January	3,540	10,600	10,900	3,250
February	3,250	10,400	10,300	3,290
March	3,290	10,900	10,800	3,460
Jan.-Mar.	XX	31,900	32,000	XX

p/ Preliminary. XX Not applicable.

1/ Excludes impure zinc oxide produced from other processes.

2/ Data are rounded to three significant digits; may not add to totals shown.

TABLE 4
ESTIMATED DISTRIBUTION 1/ OF ZINC OXIDE SHIPMENTS BY INDUSTRY 2/ 3/

(Metric tons, gross weight)

Industry	1996			1997			
	March	Jan.-Mar.	Jan.-Dec. p/	January	February	March	Jan.-Mar.
Agriculture	W	W	W	W	W	W	W
Ceramics	533	1,420	5,710	431	437	427	1,300
Chemicals	2,350	7,870	28,900	2,390	2,240	2,390	7,020
Paints	440	1,370	4,340	320	298	335	953
Photocopying	W	W	W	W	W	W	W
Rubber	7,610	24,100	87,500	7,250	6,900	7,190	21,300
Other	606	1,710	5,760	485	447	426	1,360
Total	11,500	36,500	132,000	10,900	10,300	10,800	32,000

p/ Preliminary. W Withheld to avoid disclosing company proprietary data; included with "Other."

1/ Distribution of U.S. producers only. Imports excluded because distribution by industry cannot be distinguished.

2/ May include in-house consumption.

3/ Data are rounded to three significant digits; may not add to totals shown.

TABLE 5
APPARENT CONSUMPTION OF REFINED ZINC ACCORDING TO INDUSTRY USE AND PRODUCT 1/

(Metric tons)

Industry and product	1996			1997			
	March r/	Jan.-Mar. r/	Jan.-Dec. p/	January	February r/	March	Jan.-Mar.
Galvanizing:							
Sheet and strip	39,700	110,000	494,000	53,900 r/	40,600	45,400	140,000
Other	12,400	33,100	160,000	19,600 r/	12,900	15,500	48,000
Total	52,100	143,000	654,000	73,400 r/	53,600	61,000	188,000
Brass and bronze	12,700	33,600	155,000	17,900 r/	12,400	14,600	44,800
Zinc-base alloy	17,800	50,000	229,000	22,600	14,500	21,400	57,700
Other uses 2/	17,300	48,500	172,000	15,000	13,400	14,100	42,600
Total	99,900	275,000	1,210,000	128,000 r/	93,900	111,000	333,000

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes zinc used in making zinc dust, wet batteries, desilvering lead, powder, alloys, anodes, chemicals, castings, light metal alloys, zinc oxide, rolled zinc, and miscellaneous uses not elsewhere specified.

TABLE 6
AVERAGE MONTHLY ZINC PRICES

Month	North American Special High Grade, ¢/lb	LME cash	
		¢/lb	\$/mt
1996:			
March	51.24	48.26	1,064.29
April	50.61	47.42	1,045.73
May	50.50	46.98	1,036.14
June	49.57	45.75	1,008.85
July	49.87	45.36	1,000.39
August	51.26	45.67	1,007.24
September	51.39	45.37	1,000.64
October	51.52	45.50	1,003.46
November	53.31	47.47	1,046.83
December	52.77	47.00	1,036.26
Year average	51.11	46.50	1,025.03
1997:			
January	55.17	49.28	1,086.52
February	59.26	53.50	1,179.38
March	62.69	56.92	1,254.80

Source: Platt's Metals Week.

TABLE 7
U.S. EXPORTS OF ZINC 1/

Material	1996		1997			
	Quantity (metric tons)	Value (thousands)	February		Year to date 2/	
			Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Refined (slab) zinc	1,970	\$2,350	249	\$292	528	\$616
Ore and concentrate (zinc content)	425,000	190,000	9,280	4,540	17,900	7,200
Waste and scrap (gross weight)	45,500	30,300	3,670	2,530	6,450	4,540
Powders , flakes, and dust (zinc content)	11,100	21,400	648	1,340	1,280	2,560
Oxide (gross weight)	5,770	9,430	537	623	908	1,070
Chloride (gross weight)	1,470	1,230	174	130	525	348
Sulfate (gross weight)	5,230	2,970	393	255	631	399
Compounds, other (gross weight)	1,250	4,670	17	143	47	248

1/ Data are rounded to three significant digits.

2/ Data for the current month were not available at time of publication.

Source: Bureau of the Census.

TABLE 8
U.S. IMPORTS FOR CONSUMPTION OF ZINC 1/

Material	1996		1997			
	Quantity (metric tons)	Value (thousands)	February		Year to date 2/	
			Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Refined (slab) zinc	827,000	\$882,000	62,300	\$70,800	154,000	\$169,000
Ore and concentrate (zinc content)	15,100	6,380	--	--	2,730	1,160
Waste and scrap (gross weight)	31,900	12,800	2,750	1,080	4,830	1,920
Powders , flakes, and dust (zinc content)	10,300	17,600	749	1,520	1,410	2,580
Oxide (gross weight)	56,300	57,500	5,470	5,620	9,880	10,300
Chloride (gross weight)	2,420	2,140	79	63	179	167
Sulfate (gross weight)	4,050	2,840	502	292	946	532
Compounds, other (gross weight)	1,190	1,280	90	114	207	260

1/ Data are rounded to three significant digits.

2/ Data for the current month were not available at time of publication.

Source: Bureau of the Census.

TABLE 9
SHIPMENTS OF ZINC METAL FROM THE NATIONAL DEFENSE
STOCKPILE 1/

(Metric tons)

Month	Beginning inventory	Shipments	Ending inventory
1996:			
March	272,000	--	272,000
April	272,000	1,220	271,000
May	271,000	--	271,000
June	271,000	1,430	270,000
July	270,000	1,870	268,000
August	268,000	1,460	266,000
September	266,000	2,550	264,000
October	264,000	1,630	262,000
November	262,000	2,810	259,000
December	259,000	2,110	257,000
Total	XX	16,500	XX
1997:			
January	257,000	3,020	254,000
February	254,000	4,400	250,000
March	250,000	5,080	245,000
Year to date	XX	12,500	XX

XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Defense Logistics Agency.

TABLE 10
U.S. IMPORTS OF ZINC, BY TYPE OF MATERIAL AND COUNTRY 1/

(Metric tons)

Material and country	General imports			Imports for consumption		
	1996	1997 2/		1996	1997 2/	
		February	Year to date		February	Year to date
Ore and concentrate (zinc content):						
Mexico	7,000	--	2,730	6,970	--	2,730
Peru	10,000	217	217	8,080	--	--
Other	322	--	--	91	--	--
Total	17,300	217	2,950	15,100	--	2,730
Blocks, pigs, or slab:						
Brazil	32,000	3,420	7,570	32,000	3,420	7,570
Canada	503,000	40,100	82,400	503,000	40,100	82,400
Finland	18,300	--	5,000	18,300	--	5,000
Mexico	93,900	5,000	11,300	93,900	5,000	11,300
Peru	23,800	1,000	3,500	23,800	1,000	3,500
Russia	24,100	1,030	2,180	24,100	1,030	2,180
Spain	83,200	7,940	23,000	91,400	10,400	26,500
Other	40,500	1,300	15,900	40,900	1,300	15,900
Total	819,000	59,800	151,000	827,000	62,300	154,000
Dross, ashes, & fume (content)	15,800	1,140	2,440	15,800	1,140	2,440
Grand total	852,000	61,100	156,000	858,000	63,400	160,000
Oxide (gross weight):						
Canada	28,600	2,690	5,390	28,600	2,690	5,390
China	2,070	198	244	2,070	198	244
Mexico	21,400	2,010	3,400	21,400	2,010	3,400
Other	4,420	568	844	4,310	568	844
Total	56,400	5,470	9,880	56,300	5,470	9,880
Other (gross weight):						
Waste and scrap	31,900	2,750	4,830	31,900	2,750	4,830
Sheets	16,900	1,680	3,560	16,900	1,680	3,560
Dust, powder, flakes	10,300	749	1,410	10,300	749	1,410

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Data for the current month were not available at time of publication.

Source: Bureau of the Census.